

REMARKS

Applicants have the following response to the Final Rejection of March 9, 2005. Applicants will address each of the Examiner's rejections in the order in which they appear in the Final Rejection.

Claim Rejections - 35 USC §112

§112, First Paragraph

In the Final Rejection, the Examiner rejects Claim 26-29 under 35 USC §112, first paragraph, as failing to comply with the written description requirement. This rejection is respectfully traversed.

In particular, the Examiner states that support could not be found in the specification for the phrase "wherein said load lock chamber is able to draw a vacuum to a predetermined chamber pressure each time before said substrate is introduced into said sputtering chamber" in Claim 26 and for the phrase "square shaped substrate" in Claim 27 and that each is considered new matter. Applicants respectfully disagree.

Support for the phrase in question in Claim 26 is shown, for example, at page 16, ln. 16 - page 17, ln. 25 of the specification as originally filed for the present application. Hence, this phrase is clearly supported by the application as filed and is not new matter. However, while this rejection is respectfully traversed, in order to advance the prosecution of this application and to remove all doubt from the Examiner's mind, Applicants are amending Claim 26 to recite "wherein said load lock chamber is able to ~~draw a vacuum to~~ reach a predetermined ~~chamber pressure~~ degree of vacuum each time before said substrate is introduced into said sputtering chamber." While Applicants do not believe this changes the meaning of the claim, the amended language tracks the language in the

specification at page 16, ln. 16 - page 17, ln. 25 so as to remove any doubt that this claim is clearly described in the application as filed.

With regard to the phrase “square shaped substrate” in Claim 27, page 19, lns. 25-26 of the specification of the present application as originally filed recite “a 152 mm square substrate.” Hence, the objected to phrase in Claim 27 is clearly described in the application as filed, and no new matter has been added.

Accordingly, it is respectfully requested that this rejection be withdrawn.

§112, Second Paragraph

The Examiner also rejects Claim 29 under 35 USC §112, second paragraph, as being indefinite. In particular, the Examiner objects to the phrase “the electrical discharge” in line 3 as having an insufficient antecedent basis. Accordingly, Applicants have amended line 3 to recite “an electrical discharge.” The objected to phrase now has a sufficient antecedent basis, and it is respectfully requested that this rejection be withdrawn.

Claim Rejections - 35 USC §102

The Examiner also rejects Claim 26 under 35 USC §102(b) as being anticipated by Asakawa et al. (US 5,934,856). This rejection is respectfully traversed.

More specifically, Asakawa specifically states that “[a]s shown in FIGS. 1 and 2, each of the load-lock chambers 12 and 13 has a cassette stand 25 in the center. A cassette C, which contains a plurality of wafers W, e.g. 25 wafers, in a horizontal state, is transferred to and from the cassette stand 25.” Col. 7, lns. 63-67.

In contrast, in the present invention, only one substrate is introduced into the load lock chamber at a time. See page 16, lns. 19-20 of the specification as filed. The apparatus of the present invention is designed in such a manner so that substrates can be continuously supplied to the sputtering chamber at a constant interval. This is highly advantageous over devices such as those in Asakawa. For example, when a device such as that in Asakawa, which has a multiple substrate set in the load lock chamber, is used, much time is required for setting the inside of the load lock chamber. Therefore, when the film formation ends, and the next cassette is set in the load lock chamber, the substrates are not continuously supplied to the sputtering chamber at a constant interval. As a result, the film formation in the sputtering chamber is not stabilized, and yield is bad. See e.g. pages 15-16 of specification. By having an apparatus wherein only one substrate is introduced to the load lock chamber at a time and the substrates are continuously supplied to the sputtering chamber at a continuous interval, the apparatus of the present invention is able to achieve good yield.

Applicants have amended Claim 26 herein to make this difference clear. Hence, Asakawa does not disclose or suggest the apparatus of independent Claim 26 and these claims dependent thereon, and those claims are patentable over Asakawa. Accordingly, it is respectfully requested that this rejection be withdrawn.

Claim Rejections - 35 USC §103

The Examiner also rejects Claims 27 and 28 under 35 USC §103(a) as being unpatentable over Lefebvre et al. (US 5,798,027) in view of Takeuchi (US 4,096,026). This rejection is also respectfully traversed.

In particular, Lefebvre is directed to a system that has a substrate holder (i.e. drum 14) having a rotation mechanism, wherein the holder mounts substrates on a cylindrical side thereof and rotates

about its central axis. This is not the same as the apparatus of independent Claim 27 of the present application which has a rotation mechanism for rotating the substrate around its center axis. Hence, the cited references do not disclose or suggest the claimed apparatus, and the rejected claims are patentable thereover. Accordingly, it is respectfully requested that this rejection be withdrawn.

Conclusion

Accordingly, for at least the above-stated reasons, the present application is now in a condition for allowance and should be allowed.

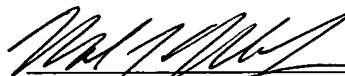
If any fee is due for this amendment, please charge our deposit account 50/1039.

Favorable reconsideration is earnestly solicited.

Date:

July 7, 2005

Respectfully submitted,



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